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REMARKS

Weinshilboum et al. does not describe overlapping reading frames.

The examiner asserts (page 6) that "Figure 4 of Weinshilboum illustrates overlapping reading frames of DNA within colon carcinoma cells. " It does not.

I reiterate what I stated in my previous communication with the examiner.

" Weinshilboum et al. makes no reference to overlapping reading frames. Figure 4 represents a cDNA molecule. The arrows, some of which overlap, represent DNA primers that were used to sequence the cDNA, *not* overlapping reading frames. "

The examiner replied to this as follows (page 9):

"Absent a limiting definition of "reading frames" in the specification, "reading frames" are interpreted broadly to encompass not only OPEN reading frames, but other reading frames as well. Consequently, the primers in Figure 4 of Weinshilboum et al. initiate transcription of DNA and each primer consequently corresponds to its own reading frame of DNA. Since these primers "arrows" overlap (as applicant states above), the reading frames corresponding to the hybridization of each primer overlap as well."

The examiner's assertion that the sequencing primers "initiate transcription" is false. The primers are not transcribed. Neither are they are translated to produce polypeptides that could be analyzed as described in the claims of the instant invention

The examiner further asserts that the because some of the arrows (representing sequencing primers) in Figure 4 overlap, they represent overlapping reading frames.

However the fact that some of the sequencing primers overlap each other has nothing to do with overlapping reading frames. Weinshilboum et al. were considering a single reading frame only, indicated by the box in the figure. Indeed the notion of overlapping reading frames is not present at all in Weinshilboum et al., nor is it ever mentioned in Weinshilboum et al., nor is it relevant to the Weinshilboum et al. patent in any way.

Since Weinshilboum et al. does not describe or contemplate overlapping reading frames, it cannot be used to support a 103 rejection based on its description of overlapping reading frames.

Weinshilboum et al. does not describe translation from overlapping reading frames.

The examiner further asserts that "Example 4, specifically lines 1-25 of Column 14, describes the procedure of comparing the predicted and calculated [sic] protein molecular mass translated from an open reading frame of the DNA." (I presume that Examiner meant to say "measured" rather than "calculated"; otherwise the sentence makes no sense.)

Lines 1-25 indicate that Weinshilboum et al. sequenced a DNA fragment that proved to contain a 735-nucleotide open reading frame that could encode a 245-amino acid polypeptide. They then compared the hypothetical tryptic fragments contained in this hypothetical polypeptide to tryptic fragments produced by digestion of a purified protein that they surmised was encoded in the sequence. They did not generate polypeptides from more than one reading frame of the polynucleotide, nor did they determine the masses of those polypeptides. There is therefore no correspondence between what was described in Weinshilboum et al. and the claims of the instant invention.

Weinshilboum et al. and Blanc et al. do not contain new prior art and should not be used to reverse the *Ex parte Quayle* determination of March 29, 2005.

Even if Weinshilboum et al. did describe overlapping reading frames, this would not represent new prior art relative to the prosecution history of the instant application. Prior art describing overlapping reading frames has been of record in the instant application since the first international search report was issued in 2000! This was eight years ago, and five years before the *Ex parte Quayle* action of March 29, 2005 when the claims were accepted by the PTO. Since overlapping reading frames are already of record in the prior art for this patent prosecution, addition of the Weinshilboum et al. art would be superfluous even if it did describe overlapping reading frames. It is therefore inappropriate for the examiner to bring this art forward as new.

Overlapping reading frames were well-known prior art when the instant application was filed in 2001. Please note that I am the sole inventor on two US patents (5,948,677 and 6,265,245) titled "Reading Frame Independent Epitope Tagging" that were issued in 1999 and 2001. These patents discuss overlapping reading frames in great detail - and they use the term "reading frame" in the exact sense in which it is used in the instant invention!

To repeat, even if Weinshilboum et al. did make reference to overlapping reading frames, and even if Weinshilboum et al. included translation of an open reading as the examiner says it does, it provides no new prior art relative to the instant application because prior art describing the same elements were of record in the prosecution prior to the *Ex parte Quayle* action of 2005.

Examiner's assertion that Blanc et al anticipates the instant invention is equally farfetched. Like Weinshilboum et al., Blanc et al determined the sequence of a DNA that they surmised might encode a protein of interest to them. They then (1) looked for an open reading frame within the sequence, (2) used the genetic code to predict the sequence of the polypeptide encoded in the open reading frame, and (3) compared properties of the

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hypothetical polypeptide with properties of the protein of interest to determine if they had actually isolated the gene for that protein. Experiments of this kind have been standard in molecular biology since the 1980's. They are not new or inventive to either Blanc et al or Weishelboum et al. Weishelboum et al. and Blanc et al do not pretend that these experiments are inventive, and they are not incorporated in the claims of either patent. And most importantly in the present context, the experiments do not read against the claims of the instant invention anyway, as I discussed in detail in my previous remarks submitted June 20, 2007 and January 4, 2008.

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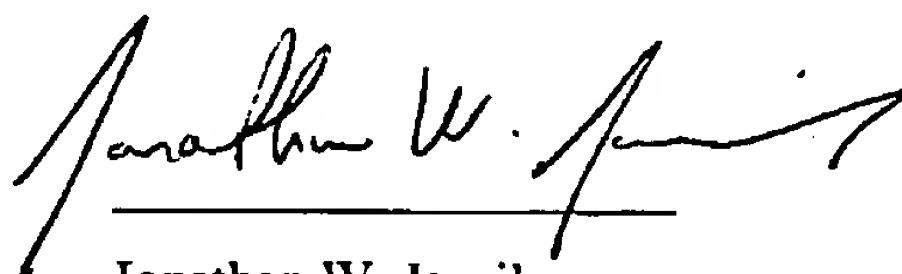
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CONCLUSION

In view of the facts and analyses presented above, applicant requests withdrawal of the rejections and allowance of claims 92-102.

Respectfully submitted,



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